NEW YORK NEUROLOGICAL SOCIETY.

Meeting, November 4, 1890.

The President, Dr. Landon Carter Gray, in the chair.

ASTASIA AND ABASIA.

A patient was presented by Dr. G. M. Hammond exhibiting the symptoms laid down as characteristic of this unusual affection. The patient, a young woman, had never been the subject of any serious illness excepting Pott's disease, which had come on during childhood. Over a year ago the speaker had attended her through an attack of nervous prostration. During her illness she had suffered from aphonia; the difficulty in standing and walking was not discovered until she was able to leave her bed. On regaining her strength sufficiently to walk around it was observed that she invariably walked by first advancing the left leg and then drawing the right one up to it. When she attempted to walk naturally, immediately that the right foot touched the ground her body would revolve rapidly to the right, when, after making a revolution and a half, she would sink to the floor. Physical examination of the limbs revealed nothing abnormal. The patient while seated or lying down could move both legs normally; with the right leg, however, more mental effort was required to make the movements. The patellar tendon reflex was normal on both sides. There was no ankle clonus, no anæsthesia, hyperæsthesia, or any other disorder of sensibility in any part of the body with the exception of slight loss of the muscular sense in the right leg. The electrical reactions, both qualitative and quantitative, were normal. The field of vision and the color sense were found normal. The senses of hearing, touch, pain and temperature were tested without anything abnormal being discovered. There was some resistance to passive flexion and extension of the right leg. These symptoms then of difficulty in standing and of inco-ordination and ataxia of movement for the act of walking, but not for other muscular acts, corresponded accurately to that condition described by Bloeg under the title of astasia and abasia. Bloeg was of the opinion that astasia and abasia was a condition pathologically similar to agraphia. The speaker did not see anything in these cases to substantiate this view.

People afflicted with the disease under consideration could make the motions of walking perfectly well if they were allowed to lie down, but it had never been claimed that an individual suffering from agraphia could write any better in one position than he could in another. The condition, it seemed to the speaker, depended upon a loss of the power of adjusting muscular contractions so as to retain an exact equipoise or equilibrium. This was, of course, a defect of the muscular sense. There was no known tract in the spinal cord, disease of which would be followed by these symptoms. Bloeg had attempted to make a distinct neurosis of this class of cases, and claimed that a differential diagnosis between hysteria and astasia and abasia could readily be made. In the latter disease there were no hysterical stigmata, he claimed, no constant paralyses or constant contractures. But the latter were by no means characteristic of all cases of hysteria, and when it was considered that every case of astasia or abasia had been accompanied by some other symptom or symptoms, such as, for example, hyperæsthesia, anæsthesia, aphonia, contraction of the visual field and temporary color blindness, all of which frequently accompanied hysteria, and since the disease under consideration was purely functional in character, no gross or microscopical lesion ever having been discovered in them, it would not be difficult to believe that astasia and abasia was merely an uncommon type of an hysterical affection.

Dr. C. L. DANA said that if it were possible to exclude any organic trouble as a factor in the case there seemed nothing left but to give the condition the name which Dr. Hammond had done. It was by no means clear that this so-called disease deserved a separate clinical position, and they were by no means aware of all the vagaries of the trouble. He thought that the diagnosis might be accepted as a provisionally correct one.

Dr. LOUISE F. BRYSON said she had recently been reading a case reported in a French journal of what was known as "left and right-sided disease," in which the patient always had to walk to the right. Physiologically the muscles of the right side were stronger than those of the left, and perhaps the case was one of exaggerated function of the muscles of the right side.

Dr. G. W. JACOBY said that in a recent number of the *Berliner Klinische Wochenschrift* Dr. Binswanger had stated his belief that the whole trouble resulted from a physical condition, as the same phenomena were found in other mental states. He had not seen a case exactly like this, but others which reminded him very much of it. He was inclined to consider the condition as a psychic manifestation. Women, after long confinement in bed, would sometimes, when attempting to walk, find themselves too weak to do so, and immediately conclude that they had lost the power. While lying down or sitting they would have entire control of their limbs, but when they essayed walking, then came the fear. It was a psychic disturbance of equilibrium. He thought that Binswanger had done as much to clear away doubt in this class of cases as others had done to confuse.

The PRESIDENT said he had never seen anything like this case. The cases of hysterical paralysis which he had seen were typical forms of paraplegia. He had also read the two cases described by Russell Reynolds, who had called them " paralysis of idea." He did not think it was well to designate this case as one of hysteria on account of the presence of some spots of anæsthesia, because it had been shown that this occurred in a great many different nervous disorders, both functional and organic. It seemed better to accept the case as a clinical entity and hold any opinion in reserve as to the cause of the manifestations.

SYRINGO-MYELIA.

Dr. J. C. SHAW presented a patient to the society suffering with, as he had diagnosed, syringo-myelitis. The patient, a single woman, thirty years of age, had always good health until about six years ago, when a weakness of her left hand was noticed. This condition had steadily increased up to the present time. For the past three years she had had a constant aching in the left arm, shoulder, and side of the neck, and lately on that side of the head. For two years there had been a numb spot on the inner side of the left arm She had constant sensations of burning on the left side of the face and neck, with flashes of heat and cold. There was a small spot on the back of the head where this burning sensation was greater than anywhere else. She presented an atrophy of the small muscles of the left hand, which had been in existence for six years, and was gradually growing worse. There was also slight atrophy in all the muscles of the arm, shoulder and face of the left side. In the area of the numb spot the tactile sensibility was impaired. The thermic sense was greatly diminished over the entire left side, and in the right lower extremity as well. The reflexes were exaggerated. While the examination of the patient had not been as careful as it might have been, the speaker thought that it was sufficient for the purpose of making a diagnosis.

Dr. B. SACHS thought the personal equation was a powerful factor in this case. It certainly had been so that evening. The case did not seem to him to be one of syringomyelia. The atrophy was not marked enough, particularly about the shoulder. The sensory symptoms were not so distinct as in a typical case. So far as he could judge, the case seemed one of amyotrophic lateral sclerosis, though further examination or observation might lead him to a different conclusion.

Dr. A. M. STARR said that there were several features about this case which reminded him of one which had come under his observation. He had not brought these points out because he did not know that they belonged to syringomyelia. One of these peculiarities was the noise made in the throat—a sound as of alarm. This had been present in his patient, who was by no means an hysterical girl. He had regarded it as a muscular contraction of the larynx during inspiration. His patient would make the noise whether she was quietly conversing in his office or was before a class of students. This feature was to be taken into consideration. He thought that the stationary condition of the atrophy in this case indicated the existence of syringomyelia rather than that of amyotrophic lateral sclerosis. He had demonstrated pretty conclusively the changes in pain-sense by sticking the point of a needle in the patient's arm without her knowing it. There was no mistake about it, for he had put the needle in a quarter of an inch. Then there was the history of a loss of temperature-sense. The patient had noticed in putting her hands in hot water that there was a difference between the two sides. Therefore, bearing in mind the non-progressive condition of the atrophy, the existence of changes in the temperature and pain senses, he supposed they were warranted in making a diagnosis of syringo-myelia at the present date.

Dr. SACHS thought the question depended upon the actual condition of the sensory derangements in this case, and of course the examination had been but cursory.

Dr. W. R. BIRDSALL thought that where the results of examination were so at variance, it would be hardly worth while to attempt any expression of opinion in the way of diagnosis. It had been his impression from the description of cases of syringo-myelia of which he had read, and in which an autopsy had been held as confirmatory evidence, that the histories had given the pain and temperature sense as having been both affected. He should say that the case before them was at least typical in this respect. As to this disease, it was a remarkable fact that, during the past year, of the cases in which syringo-myelia had been diagnosed during life there was no autopsy, while in those autopsies which had revealed the existence of the disease, its presence had not been suspected during life.

Dr. DANA said that last spring he had a patient in his hospital service who had presented many similar symptoms. There had been atrophy in the muscles supplied by the ulnar nerve and in the small muscles of the hand. There was also anæsthesia, involving the temperature and pain senses. The atrophy had slightly involved the opposite side. There was also a belt of anæsthesia over the lower portion of the trunk, and extending to the thighs. There was no disturbance to the sensory functions. The girl had gradually developed symptoms of bulbar paralysis without any sensory symptoms accompanying. He had been obliged to regard this as a typical case of progressive muscular atrophy. He had since seen a case of progressive muscular atrophy in which sensory symptoms were present. If the symptoms of bulbar paralysis were developed in the case before them, it would, he thought, turn out to be a case of progressive muscular atrophy. As to amyotrophic lateral sclerosis, it was simply another name for the same disease.

The PRESIDENT said the only way to make a diagnosis of syringo-myelia seemed to be to make an autopsy. The value of the loss of thermic sense in a patient as a diagnostic point was, to a great extent, vitiated by the fact that the relations of this sense to other organic spinal diseases were unknown. He thought they would be unable to establish the fact satisfactorily that this was a case of syringo-myelia until the woman died.

A CASE OF SPINA BIFIDA, WITH SUPPURATIVE MENINGITIS AND EPENDYMITIS OF BACTERIAL ORIGIN.

By Drs. L. Emmett Holt and Ira Van Giesen. See page 774.

Dr. L. E. HOLT said he had seen one other of these cases of hydrocephalus in which the disease had existed without any symptoms during life. He thought there were probably a great many more than was usually supposed. He had been surprised to find that the ventricles contained several ounces of fluid. He had seen several cases of basilar meningitis in which only a moderate amount of distention of the ventricles was found. In two of these cases the entire contents of the lateral ventricles would not have exceeded an ounce.

CEREBRAL COMPRESSION.

Dr. E. D. FISHER read a paper with this title. He said that while he had nothing new to present, he thought that he could settle definitely the question of the influence of compression on the cerebral mass within the skull, and whether the cerebral substance was, *per se*, compressible without interference with its capillary circulation or function. Bergnamis and Adam Knoiez (?) hold the views that the brain substance was incompressible, the only conditions of change possible in the cerebral volume being those dependent on the displacement or variation in the cerebro-spinal fluid or the cerebral circulation, these standing in converse relation to each other. The question of the compressibility of the brain depended on which of the elements comprising the brain was most liable to compression ; as the blood pressure was higher than that of the cerebral fluids, it was possible that the tissue fluids were first affected. Much depended also as to whether we regarded the liquor cerebri as a secretion or as a transudation from the blood vessels, as in the latter case we would have to consider arterial tension as a very important factor in cerebral compression. The vascular centre was not only situated within the medulla, but probably also within the brain : *i. e.*, the corpus striatum or optic thalamus. The brain possessed a mechanism of its own for increasing its blood supply, independent of increased cardiac action. Experimentally it had been proven that cold acted deeply within the brain. Its good effect was very marked in the headaches of the anæmics, the ice-bag being an efficient remedy. The cold probably acted by increasing the blood current rapidity in the capillaries, and by causing spastic contraction of the arteries. In these cases, the amount of the blood passed through the brain by increasing the rapidity made up in quantity for the quality, thereby maintaining the nutrition. The extent of a cerebral hæmorrhage depended on the arterial pressure or tension, the intra-cerebral pressure, and also on the resistance of the brain substance, the latter, of course, depending on the site of the hæmorrhage. By spastic contraction of the arteries of the brain we really had active hyperæmia, the decreased volume of skull contents causing increased capillary circulation. By paralytic dilatation of the arteries we had passive hyperæmia, which was, in fact, anæmia, the blood being no longer in a proper state to carry on the nutrition of the brain, as the increased volume of the brain caused retardation of the capillary circulation, and probably also interfered with the venous circulation. The speaker's experiments had been made by exposing the pia mater and observing the changes produced in the blood vessels. Extension of the sciatic nerve produced increased volume of the brain. Compression of the carotids caused marked loss of volume. Asphyxia caused expansion of the brain. Chloral caused anæmia, with marked contraction. Chloroform contracted, ether at first contracting and subsequently expanding the brain. Strychnia caused marked expansion, as did digitalis and small doses of alcohol. Caffeine and the acids caused expansion, while the alkalies produced the reverse result. Drawing from his experiments, the speaker concluded that the blood supply of the brain varied directly with the blood pressure in the systemic arteries, and that the extensibility of the walls of the cerebral vessels allowed of great variation in calibre. The vaso-constrictor centres were excited directly by disturbance with the nutrition of the nervous system, as in anæmia, asphyxia, and so forth. Finally, that the essential product of cerebral metabolism contained in the lymph spaces bathed the walls of the arterioles and could cause variations in the calibre of the vessels, that this mechanism reacted on the brain, and that by this means the vascular supply could be varied locally according to local varieties of functional activity.

Dr. JACOBY said that the demonstration that the nerve tissue could be compressed in its molecules and anatomical elements had been claimed by one author. Another had maintained the non-compressibility of these elements, but had further stated that the effect of hæmorrhage was due to anæmia of the brain. This was as a theory substantiated by comparing the clinical symptoms in such hæmorrhage with the symptoms caused by the injecting of lycopodium powder into the cerebral vessels, and producing thrombi. He then referred to the experiments of one who had demonstrated the displacement of the cerebral spinal fluid. In one case in which rice was injected the aqueduct of Sylvius was found to be ruptured, and the lateral ventricles flattened together. This experimenter had inferred that the very suddenness with which the compression was exercised had caused the violent displacement of the cerebro-spinal fluid and consequent rupture. The same observer had also estimated very minutely the amount required to oppose the arterial tension, and had claimed that if at any time an effusion took place on the surface of the brain, to entirely balance this death must instantly result. Dr. Fisher had pointed out the necessity of maintaining arterial tension, rather than depressing it, upon this very theory. It had been suggested that in cerebral hemorrhage the head should be hung down to mechanically send blood to the head, and thus oppose the effusion which was taking place from the ruptured vessels. He did not know whether this had ever been put into practice.

PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated Meeting, October 27, 1890.

DR. CHARLES K. MILLS in the Chair.

Dr. W. W. KEEN and Dr. F. X. DERCUM gave details of an operation, and the particulars of a case of spasmodic wry neck.

The following is an abstract of the remarks of Dr. Keen upon the operation.[1]

A RESUMÉ OF A NEW OPERATION FOR SPASMODIC WRY NECK, NAMELY, DIVISION OR EXSECTION OF THE NERVES SUPPLYING THE POSTERIOR ROTATOR MUSCLES OF THE HEAD.

BY W. W. KEEN, M.D.,

Professor Principles of Surgery, Jefferson Medical College.

Three years ago, while studying carefully a case of spasmodic torticollis with Dr. S. Weir Mitchell, he asked me, in view of the implication of the posterior muscles of the neck which rotated the head, as well as of the sterno-cleido, whether it would be possible to do an operation for dividing or excising all the supplying nerves. A number of careful dissections determined the feasibility of the operation, and

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[1] The full report will be published in "The Annals of Surgery," for January, 1891.